

EXHIBIT 11

| Deposition | Plaintiffs' Designation | Defendants' Corresponding Counter Designation | Reason that Defendants' Counter Designation Must be Considered According to Fed.R.Civ.P 32(a)(4) |
|------------------------------|---------------------------------|--|---|
| Warren Nord, June 7, 2005 | 94:9-95:5, 129:21- 130:20 | 45:22-46:9 | Defendants' designation provides a clear statement that intelligent design is science, which relates to Plaintiffs' designations regarding how there is no Darwinian explanation for getting from non-living matter to living matter, and what the scientific establishment says about theories |
| | 94:9-95:5, 97:4-17 | 64:4-68:3 | Defendants' designation provides a full and uninterrupted explanation of Nord's position on the sections designated by Plaintiffs regarding an explanation for the origin of life in terms of intelligent design, Darwinian theory and gaps in evolutionary theory |
| | 97:4-17 | 76:18-77:15 | Defendants' designation addresses the topic of how intelligent design draws on what Plaintiffs term "accepted science," and provides part of Nord's view on those topics, and relates to the subject matter of Plaintiffs' designation regarding gaps in evolutionary theory and specifically Behe's cellular level research, which is noted in both Plaintiffs' and Defendants' designations |
| | 94:9-95:5, 97:4-17 | 82:8-83:13 | Defendants' designation addresses whether intelligent design is good science and why students should learn about it, and is related to Plaintiffs' designations about how there is no Darwinian explanation for certain origin of life issues |
| | 94:9-95:5, 97:4-17 | 86:5-15 | Defendants' designation explains a large gap in Darwin's theory, and appears shortly before two of Plaintiffs' designations also dealing with gaps in Darwinian theory |

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| | 97:4-17 | 97:24-100:18 | Plaintiffs' have designated part of Nord's answer to a question and object to Defendants' designation, which is a continuation of the same unbroken answer regarding intelligent design theory |
| | 129:17- 129:19, 129:21- 130:20 | 130:21-144:1 | Defendants' designation immediately follows Plaintiffs' and is the continuation of a line of questioning about Nord's expert report and confirmation of scientific theories |

SHEET 1

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA
CIVIL ACTION NO. 4:04-CV-2688

TAMMY J. KITZMILLER;)
 BRYAN REHM, CHRISTY REHM;)
 DEBORAH F. FENIMORE;)
 JOEL A. LIEB; STEVEN STOUGH;)
 BETH A EVELAND; CYNTHIA)
 SNEATH; JULIE SMITH;)
 ARALENE D. CALLAHAN) D E P O S I T I O N
 ("BARRIE"); FREDERICK B.)
 CALLAHAN,) O F
)
) W A R R E N
 Plaintiffs,)
) A.
 vs.)
) N O R D,
 DOVER AREA SCHOOL DISTRICT;)
 DOVER AREA SCHOOL DISTRICT) P H . D .
 BOARD OF DIRECTORS,)
)
)
 Defendants.)

A P P E A R A N C E S

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In Chapel Hill, N.C.
 June 7, 2005

Reported by:
 Rebecca R. LeClair, CVR

| | | | | | | |
|----------|-----------------------|---|------|-----------------------|---|---|
| SHEET 12 | Warren A. Nord, Ph.D. | Direct | -42- | Warren A. Nord, Ph.D. | Direct | -44- |
| 1 | A | Okay. | | 1 | reality or an aspect of reality that--that | |
| 2 | Q | So the philosophical naturalists would say, "There | | 2 | transcends what we can know naturalistically. And | |
| 3 | | is no divine purpose in life"-- | | 3 | the different great world religions have defined | |
| 4 | A | Uh-huh (yes). | | 4 | that in very different senses. And in some | |
| 5 | Q | --"and, indeed, there is no divinity." | | 5 | religious traditions, you--you have God, and in | |
| 6 | A | Uh-huh (yes). | | 6 | others, you have nirvana, or Brahman, or the Tao, | |
| 7 | Q | The philosophical naturalist would say, "There are | | 7 | and something that doesn't look all that familiar | |
| 8 | | no absolute moral values; there are socially | | 8 | to our idea of God within the Western tradition, | |
| 9 | | useful"-- | | 9 | but it's still an understanding of reality that | |
| 10 | A | Okay. | | 10 | transcends in some--in important ways what--what a | |
| 11 | Q | --"values." So the philosophical naturalists would | | 11 | naturalistic scientific worldview allows us to--to | |
| 12 | | take a religious approach-- | | 12 | say about reality. | |
| 13 | | MR. GILLEN: Objection. I'm sorry. | | 13 | And that's crucial to religion, to my way | |
| 14 | Q | --in term--religion in the sense of providing | | 14 | of thinking, so that naturalism doesn't become | |
| 15 | | ultimate meaning--and say that there is no ultimate | | 15 | religious just because it gives negative answers to | |
| 16 | | meaning. | | 16 | religious questions. | |
| 17 | | MR. GILLEN: Objection-- | | 17 | Q | Okay. |
| 18 | Q | Fair enough? | | 18 | A | I'm--I'm not sure that much hangs on that, in the-- |
| 19 | | MR. GILLEN: Objection to the form. Go | | 19 | | in the end, even constitutionally, but--but I think |
| 20 | | ahead. Answer. | | 20 | | that's the clearest use of--of the term "religion." |
| 21 | Q | And that was so clumsy, I'll come back and do it | | 21 | Q | And to wrap up this segment-- |
| 22 | | again. | | 22 | A | Okay. |
| 23 | | MR. GILLEN: No. You know what, Chub, | | 23 | Q | --is it your view that that religious--strike that. |
| 24 | | you and I both know it's a complicated subject | | 24 | | Is it your view that that appreciation |
| | Warren A. Nord, Ph.D. | Direct | -43- | Warren A. Nord, Ph.D. | Direct | -45- |
| 1 | | matter. | | 1 | for the reality of a transcendent purpose to | |
| 2 | A | Okay. If--given the religious answer, if--if | | 2 | reality needs to be brought into both science and | |
| 3 | | "religion" means answering a question that has | | 3 | science education in public schools? | |
| 4 | | religious implications--like "Is there meaning?"-- | | 4 | MR. GILLEN: Object to the form. | |
| 5 | | and if you say no, because you've given an answer | | 5 | Let me give you a qualified yes, because a | |
| 6 | | to a religious kind of question, then philosophical | | 6 | straightforward yes would invariably be | |
| 7 | | naturalism, I suppose, could be called a kind of | | 7 | misunderstood. So--and again, my understanding-- | |
| 8 | | religion. | | 8 | the--the conception of science education that I | |
| 9 | | I myself don't like to use "religion" | | 9 | argue for is locating science, in part, | |
| 10 | | in--in that way. For--for me, a religious view is | | 10 | historically and philosophically in relationship to | |
| 11 | | a view that holds that there is some kind of | | 11 | other subjects, other areas of our cultural life. | |
| 12 | | purpose or meaning to existence beyond naturalism, | | 12 | So that a good science education should help | |
| 13 | | so that naturalism simply--it--it doesn't make much | | 13 | students understand the relationship of science to | |
| 14 | | sense to call that a religious view. But that-- | | 14 | moral issues, political issues, religious concerns. | |
| 15 | | that's a view about--that's my effort to try and | | 15 | That doesn't mean that religious views | |
| 16 | | avoid using the word "religion" in an unduly | | 16 | should be understood to be--should be understood to | |
| 17 | | controversial or complicated way. | | 17 | provide some kind of legitimate alternatives to | |
| 18 | Q | And forgive me, because my notes got in the way of | | 18 | science, that they can become--that--that they--for | |
| 19 | | my understanding. You said a religious view as you | | 19 | example, that--that Genesis should be taught in a | |
| 20 | | would view it requires that there is a meaning or | | 20 | science class--class as a contender with | |
| 21 | | purpose to life, did you say? | | 21 | establishment science, no. | |
| 22 | A | To reality. | | 22 | Science classes should teach science. I | |
| 23 | Q | To reality? | | 23 | think they should include some discussion of IDT | |
| 24 | A | To reality. That's right. There is a dimension to | | 24 | because IDT should be considered science. At the-- | |

| SHEET 13 | | Deposition of: Warren A. Nord, Ph.D. | |
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| 1 | Warren A. Nord, Ph.D. | Direct | -46- |
| 2 | at--at the least, students should be made aware of | | |
| 3 | the controversy over whether IDT is science. But | | |
| 4 | any science class should also locate students | | |
| 5 | within the larger cultural conversation we're | | |
| 6 | having about important things. | | |
| 7 | So, to that extent, religious, moral, and | | |
| 8 | political views that science impinges on, has | | |
| 9 | implications for, need to be part of the framework | | |
| 10 | for locating students. | | |
| 11 | MR. WILCOX: Okay. Why don't we take a | | |
| 12 | little break. | | |
| 13 | MR. GILLEN: Sure. | | |
| 14 | MR. WILCOX: We've been going for an | | |
| 15 | hour. | | |
| 16 | MR. GILLEN: Certainly. | | |
| 17 | (ELEVEN-MINUTE RECESS) | | |
| 18 | | | |
| 19 | Q (By Mr. Wilcox) If you will turn to the second | | |
| 20 | page of your opinion-- | | |
| 21 | A (Examines paperwritings.) Uh-huh (yes). | | |
| 22 | Q --there's a paragraph under the heading "Critical | | |
| 23 | Thinking." | | |
| 24 | A Yes. | | |
| 1 | Warren A. Nord, Ph.D. Direct | -47- | |
| 2 | And it's the next-to-the-last paragraph. And you | | |
| 3 | say, quote, "We disagree deeply in our culture | | |
| 4 | about how to make sense of nature," and then the | | |
| 5 | sentence continues. | | |
| 6 | A (Examines paperwritings.) Uh-huh (yes). | | |
| 7 | Q And I want to go into each of the parts of it. | | |
| 8 | A Okay. | | |
| 9 | Q In talking about this disagreement in our culture | | |
| 10 | about how to make sense of nature, are you talking | | |
| 11 | about this question whether there is or is not a | | |
| 12 | transcendent purpose in reality? | | |
| 13 | MR. GILLEN: Objection to the form. | | |
| 14 | A Yes. But again, the--the controversy occurs on, I | | |
| 15 | think, two different levels. One is the level of | | |
| 16 | our culture wars, where the--the issue is | | |
| 17 | oftentimes framed in terms of creationism versus | | |
| 18 | evolution. And--and as I said, I--I think we need | | |
| 19 | to recognize that there are alternative positions | | |
| 20 | there, that the usual culture-wars rhetoric doesn't | | |
| 21 | work very well. | | |
| 22 | And then there's also disagreement | | |
| 23 | among--more narrowly among scholars--and, in fact, | | |
| 24 | I think, among scientists--about how to make sense | | |
| | of nature, so--where IDT is--is one of the major | | |
| 1 | Warren A. Nord, Ph.D. Direct | | -48- |
| 2 | issues. | | |
| 3 | But that--it's not--that's not the only | | |
| 4 | source of that kind of conflict. It comes up with | | |
| 5 | regard to fine-tuning in cosmological evolution. | | |
| 6 | It comes up with regard to the origins of life. It | | |
| 7 | comes up with the nature of mind and morality. | | |
| 8 | There are--there are conflicts there among | | |
| 9 | scholars, among philosophers and scientists and | | |
| 10 | sometimes theologians, that the public is simply | | |
| 11 | unaware of. So--so, you know, we've got to do a | | |
| 12 | kind of two-layer analysis, I think. | | |
| 13 | Okay. You continue in the sentence, "we disagree | | |
| 14 | about evolution." | | |
| 15 | A Uh-huh (yes). | | |
| 16 | Q Is this the disagreement as to whether evolution | | |
| 17 | has purpose or not, or is this the disagreement as | | |
| 18 | to whether evolution explains the origin of species | | |
| 19 | or not? | | |
| 20 | MR. GILLEN: Object to the form. | | |
| 21 | A Well, again, there are several different | | |
| 22 | disagreements. As I said, there's--there's the | | |
| 23 | culture-wars disagreement, where it's evolution | | |
| 24 | versus creationism oftentimes. There's a more | | |
| | sophisticated analysis which--which says it's not | | |
| 1 | Warren A. Nord, Ph.D. Direct | | -49- |
| 2 | evolution versus creationism, but it's different | | |
| 3 | understandings of evolution: Is there a design, is | | |
| 4 | there a purpose to evolution? And then there's-- | | |
| 5 | there's the--the conflict within and on the borders | | |
| 6 | of science about whether or not there should be | | |
| 7 | design explanations allowed into science. So--so | | |
| 8 | it's a multilayered disagreement, I think. | | |
| 9 | Q And--and the third sentence--the third statement in | | |
| 10 | this sentence is, quote, "we disagree about the | | |
| 11 | relationship of science and religion." | | |
| 12 | A (Examines paperwritings.) Yeah. | | |
| 13 | Q And this is something that I don't think we've | | |
| 14 | talked about yet this morning. What is the | | |
| 15 | disagreement about the relationship of science and | | |
| 16 | religion that you refer to? | | |
| 17 | A Well, one of the questions is, of course, whether | | |
| 18 | design explanations should be allowed into science | | |
| 19 | or whether they're inherently religious. And my | | |
| 20 | view, as I say later in the paper, is that they | | |
| 21 | should be allowed into science, that they aren't, | | |
| 22 | by their nature, religious. | | |
| 23 | Q But there's--you know, there's a huge | | |
| 24 | literature now on the relationship of religion and | | |
| | science. Ian Barbour, in the kind of work that's | | |

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| SHEET 17 | | | |
| 1 | Q | Warren A. Nord, Ph.D. Direct | -62- |
| 2 | A | Can--I want to focus on high school here. | |
| 3 | Q | Yeah. Four years of--of high-- | |
| 4 | A | Okay. | |
| 5 | A | --high-school science, and four years of science | |
| 6 | | shaped by methodological naturalism. And it--it | |
| 7 | | conveys to them, unless a good deal of time and | |
| 8 | | effort is spent, the idea that science can actually | |
| 9 | | tell us everything that's to be said about nature. | |
| 10 | | And--and that's controversial. And that | |
| 11 | | inevitably--naturally, at least--slides over into a | |
| 12 | | kind of philosophical naturalism. The only way to | |
| 13 | | avoid that is to give them some kind of substantive | |
| 14 | | examples of--and which a liberal education | |
| 15 | | requires--of how science might have limitations | |
| 16 | | and--and how design might figure into our | |
| 17 | | understanding of nature, or even how nature, as | |
| 18 | | understood by modern science, might relate to God. | |
| 19 | | MR. WILCOX: May I have that repeated, | |
| 20 | | just the last twenty words? | |
| 21 | | (Whereupon, the sentence at Lines 11 through 17 | |
| 22 | Q | on this page was read back.) | |
| 23 | A | (By Mr. Wilcox) I did not understand your | |
| 24 | A | reference to design-- | |
| | A | Uh-huh (yes). | |
| 1 | Q | Warren A. Nord, Ph.D. Direct | -63- |
| 2 | A | --in that last answer to necessarily be a reference | |
| 3 | | to what we've been talking about as intelligent- | |
| 4 | | design theory. | |
| 5 | A | Uh-huh (yes). | |
| 6 | Q | Did you understand it to refer to intelligent- | |
| 7 | | design theory, or, more broadly, to the question of | |
| 8 | | a transcendent god providing a purpose in life-- | |
| 9 | | MR. GILLEN: Objection to form. | |
| 10 | Q | --or--or in reality? | |
| 11 | A | I'm not sure that I understand the question. | |
| 12 | Q | Okay. We've been talking design, I think, in two | |
| 13 | A | different senses. | |
| 14 | Q | Uh-huh (yes). | |
| 15 | A | One is the narrow, inferential, explanatory-- | |
| 16 | Q | Uh-huh (yes). | |
| 17 | A | --sense of intelligent-design theory-- | |
| 18 | Q | Right. | |
| 19 | | --and the other is--and perhaps we haven't been | |
| 20 | | talking about it; it's only me thinking fuzzily | |
| 21 | | about it--design in the sense of a purpose-- | |
| 22 | A | Uh-huh (yes). | |
| 23 | Q | --of reality-- | |
| 24 | A | Uh-huh (yes). | |
| | Q | --that purpose being informed by a transcendent | |
| 1 | Q | Warren A. Nord, Ph.D. Direct | -64- |
| 2 | A | god. | |
| 3 | Q | MR. GILLEN: Object to form. | |
| 4 | A | Is that consistent with your understanding? | |
| 5 | | So, there are three possibilities here. One is the | |
| 6 | | narrowest sense that--where a scientist might | |
| 7 | | suggest a design explanation with regard to some | |
| 8 | | fairly discrete phenomenon--how cells work, for | |
| 9 | | example. | |
| 10 | | And then secondly, there's a larger | |
| 11 | | question about whether that provides some kind of | |
| 12 | | evidence for claims that there is a purpose in | |
| 13 | | nature that--that--or a design in nature. | |
| 14 | | And then there's a third level, which is, | |
| 15 | | how do we explain that design in nature? Do we | |
| 16 | | appeal to a supernatural god--to a god or a | |
| 17 | | supernatural being who causes it? | |
| 18 | | My argu--my position is that--of course, | |
| 19 | | that you can make design explanations, and you can | |
| 20 | | hold the position that there's design in nature | |
| 21 | | apart from any commitment, theological commitment, | |
| 22 | | to a god or to a supernatural being, that those are | |
| 23 | | distinguishable--conceptually distinguishable kinds | |
| 24 | | of--of questions. All the time, in--in our | |
| | | ordinary everyday relationships, and indeed in the | |
| 1 | Q | Warren A. Nord, Ph.D. Direct | -65- |
| 2 | A | practice of science, we talk about things being | |
| 3 | | designed with--without presupposing that--that we | |
| 4 | | have to use religious language or theological | |
| 5 | | language in doing that. | |
| 6 | | So, certainly, we can talk of the idea of | |
| 7 | | design as conceptually independent of the--of the | |
| 8 | | idea of God. But, of course, when we talk about | |
| 9 | | the design inherent in cells or in fine-tuning | |
| 10 | | after the Big Bang, of course, the big question is, | |
| 11 | | how does that design get to be there? But it's | |
| 12 | | still a conceptually discrete question. You don't | |
| 13 | | have to have a religious--you--you can--you can | |
| 14 | | still have evidence for and a make a good argument | |
| 15 | | for design without having any kind of theological | |
| 16 | | or religious commitments, it seems to me. | |
| 17 | | So I--I want to be careful to distinguish | |
| 18 | | design questions from religious questions. And-- | |
| 19 | | and that's what allows me to say that design | |
| 20 | | questions should be allowed in a somewhat enlarged | |
| 21 | | science. That doesn't run us the risk of making | |
| 22 | | science into a quasi-religious endeavor or a | |
| 23 | Q | theological endeavor. | |
| 24 | Q | Can you identify for us one intelligent-design | |
| | | theorist who claims that the source of the design | |

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| SHEET 18 | | | |
| Warren A. Nord, Ph.D. | Direct | -66- | Warren A. Nord, Ph.D. Direct -68- |
| 1 was some extraterrestrial alien? | | 1 | religious in some deep sense. But, I mean, that's |
| 2 A Now, I know that Francis Crick argued that maybe | | 2 | all--about all I know about their private religious |
| 3 life arose here as a result of intelligent beings | | 3 | views. |
| 4 elsewhere in the universe sort of implanting it. | | 4 Q | You pose the question, in your report, at the top |
| 5 But he, of course, wasn't an intelligent-design | | 5 | of Page 5, "Is IDT science?" |
| 6 theorist. | | 6 A | Uh-huh (yes). |
| 7 I guess I just don't--I don't see the | | 7 Q | And you suggest, quote, "Arguably, what should be |
| 8 point. No, I mean, intelli--but intelligent-design | | 8 | taken seriously as science is in part, at least, a |
| 9 theorists claim that in the--claim that they can | | 9 | matter of what good scientists take seriously." |
| 10 do--that they can make design arguments apart from | | 10 | That strikes me as fairly circular. How do you |
| 11 theological convictions or--or commitments. And | | 11 | identify what is a good scientist if you don't have |
| 12 that makes perfectly good sense to me. | | 12 | a notion of what science is? |
| 13 Undoubtedly, some, maybe many, maybe most | | 13 A | Well, it--it moves the focus from science in the |
| 14 of all them, do have religious convictions. But | | 14 | abstract to what particular individuals do. So, |
| 15 still, you can distinguish the--the design | | 15 | first of all, it's important to point out the "is |
| 16 argument, the evidence for the design argument, | | 16 | in part," because it's in part a matter of |
| 17 from the theological position which they may or | | 17 | something else, which is philosophical |
| 18 they may not hold. So that intelligent design as | | 18 | considerations. |
| 19 science doesn't imply or require any kind of | | 19 | But one way of--of deciding what good |
| 20 religious worldview or conviction. It--it may well | | 20 | science is is to look at what scientists do, and |
| 21 be that the only way--or that the best way--maybe I | | 21 | that shifts the focus: Okay, then, what makes for |
| 22 should say "the best way." It may well be that the | | 22 | a good scientist? And--and the answer there is, |
| 23 best way of explaining the design is in terms of a | | 23 | given our ordinary understanding of science, it's |
| 24 supernatural god. | | 24 | somebody who's gotten a Ph.D. from a research |
| Warren A. Nord, Ph.D. Direct -67- | | Warren A. Nord, Ph.D. Direct -69- | |
| 1 But there certainly are a variety of | | 1 university, who perhaps teaches in research | |
| 2 philosophical positions and very liberal religious | | 2 universities, who publishes in journals, and who | |
| 3 positions which hold that there's design in the | | 3 has certain kind of credentials. And then what | |
| 4 world but that it's not there because of a | | 4 those folks do is--is define good science for us. | |
| 5 supernatural god, the kind of god that's part of | | 5 Some of the folks with those kinds of | |
| 6 orthodox religious traditions: Aristotelian views; | | 6 credentials--not many, but a significant number-- | |
| 7 process-theology, process-philosophy views; some | | 7 the leading intelligent-design theorists have | |
| 8 feminist views of nature. | | 8 Ph.D.s from good, reputable research universities | |
| 9 So--so--and again, I want to draw that | | 9 and teach in research universities, have published | |
| 10 sharp distinction between design on the one hand | | 10 some in--in the peer-reviewed journals, and--and | |
| 11 and supernaturalistic religion on the other. | | 11 yet, they--and they--they know establishment | |
| 12 Design is supernaturalistic in sense "B." Design | | 12 science inside and out, and yet they have come to | |
| 13 isn't allowed, given the constraints of | | 13 believe that methodological naturalism is too | |
| 14 methodological or philosophical naturalism, but you | | 14 restrictive, that it's a--a kind of--well, it's in | |
| 15 can still have design without committing yourself | | 15 effect a kind of scientific fundamentalism that | |
| 16 to supernaturalism "A," which is a designer--an | | 16 doesn't allow design explanations to be taken | |
| 17 independent supernatural god. Next question. | | 17 seriously. | |
| 18 Q Do you know of any intelligent-design theorists who | | 18 And--and so one of the ways of defining | |
| 19 are not also practicing Christians? | | 19 what good science is is to see what scientists with | |
| 20 A I don't know the religious backgrounds of many of | | 20 the appropriate kind of credentials end up doing. | |
| 21 them. I know Behe's a Catholic. I don't know if | | 21 And so it's important, I think, that these aren't | |
| 22 he's a good Catholic or a bad Catholic. That's his | | 22 people who went to Bible colleges or that rely for | |
| 23 tradition. And I know that Phillip Johnson has | | 23 their understanding of nature on--on Genesis, but | |
| 24 made various kinds of remarks that suggest he's | | 24 that they are thoroughly and totally at home in | |

| SHEET 20 | | | |
|----------|-----------------------|---|------|
| 1 | Warren A. Nord, Ph.D. | Direct | -74- |
| 2 | A | establishment science?" | |
| 3 | Q | Yeah. | |
| 4 | Q | Other than Michael Behe, can you identify for us | |
| 5 | | one intelligent-design theorist who has a standing | |
| 6 | | within establishment science? I'm not talking | |
| 7 | A | about mathematics; I'm talking science. | |
| 8 | A | I--I guess, if the question is "Are there people | |
| 9 | | who established a relationship and published in | |
| 10 | | science before they became intelligent-design | |
| 11 | | theorists?" I--I don't know. You know, about the | |
| 12 | | best that I can do in response to that question is | |
| 13 | | to say I'm not a scientist, and I do observe this | |
| 14 | | debate more through the kind of general literature | |
| 15 | | than through my reading of scientific journals or | |
| 16 | Q | the science--the science itself. | |
| 17 | Q | You continue: "What kinds of research have they | |
| 18 | | done?" I--I assume here you're talking about IDT | |
| 19 | | scientists and what kinds of IDT research have they | |
| 20 | A | done? | |
| 21 | A | No, not necessarily. Have they done--but here, | |
| 22 | | it's important--again, I mean, anybody who gets a | |
| 23 | | Ph.D. from a research university is going to | |
| 24 | | have--have done research in establishment science, | |
| | | and so that's crucial. | D |
| 1 | Warren A. Nord, Ph.D. | Direct | -75- |
| 2 | | How familiar are they with establishment | |
| 3 | | science? What kinds of credentials do they have | |
| 4 | | because of their--their educations and things that | |
| 5 | | they might have published apart from--from IDT? | |
| 6 | | And it's a more-or-less kind of question. That's | |
| 7 | | relevant to--to judging--and--and again, how much | |
| 8 | | of establishment science do they have to reject? | |
| 9 | | If you're a creation--an old-fashioned | |
| 10 | | creation scientist and have to give up carbon-14 | |
| 11 | | dating, and the age of the earth, and dinosaurs, | |
| 12 | | and all kinds of other things like that, you know, | |
| 13 | | that's an argument for saying that just can't be | |
| 14 | | considered science. But I take it that most of the | |
| 15 | | IDT people don't do that, that they accept an awful | |
| 16 | Q | lot of science. | |
| 17 | Q | Do they accept that man evolved from lower life | |
| 18 | | forms? | |
| 19 | A | MR. GILLEN: Object to the form. | |
| 20 | A | I don't know. I suppose I have to say I don't know | |
| 21 | | the answer to that. I know in--in at least a few | |
| 22 | | cases--I mean, Behe, I know, accepts evolution; | |
| 23 | | he's an evolutionist. And as a matter of fact, he | |
| 24 | | said--in a New York Times piece this spring, he | |
| | | says most IDT theorists are evolutionists; it's | |
| 1 | Warren A. Nord, Ph.D. | Direct | -76- |
| 2 | Q | just that they think the design has to enter into | |
| 3 | | the question of evolution. So, in some sense, yes, | |
| 4 | | we descend from other life forms. It's just that | |
| 5 | | you can't explain that evolutionary process in | |
| 6 | | neo-Darwinian terms--or you can't explain it fully | |
| 7 | Q | in neo-Darwinian terms. | |
| 8 | Q | Do IDT theorists tend to believe that the great | |
| 9 | | majority of species were--suddenly appeared-- | |
| 10 | | MR. GILLEN: Objection to form. Spec-- | |
| 11 | Q | sorry. | |
| 12 | A | --with no record in the fossil record? | |
| 13 | | I-- | |
| 14 | | MR. GILLEN: Objection to form. | |
| 15 | A | Speculation. | |
| 16 | Q | I--I don't know. | |
| 17 | A | Do you remember reading that in Pandas and People? | |
| 18 | Q | No. | |
| 19 | | You pose the question "To what extent does the | |
| 20 | | theory draw on accepted science?" "Draw on" is a | |
| 21 | | little vague. Is it your view that intelligent | |
| 22 | A | design draws on methodological naturalism? | |
| 23 | | It certainly draws on--I mean, it certainly draws | |
| 24 | | on--on other aspects of science. And insofar as-- | |
| | | as pretty much all science is defined by | |
| 1 | Warren A. Nord, Ph.D. | Direct | -77- |
| 2 | | methodological naturalism, it certainly draws on | |
| 3 | | the conclusions of that science to--as--as part of | |
| 4 | | its case. | |
| 5 | | I mean, again, to think of Behe, he | |
| 6 | | doesn't--you know, this doesn't come all out of the | |
| 7 | | blue, his theory. He's--he locates his design | |
| 8 | | arguments in the context of very deeply textured | |
| 9 | | understandings of the cell, which is drawn from-- | |
| 10 | | from establishment science. So it's--it's not, | |
| 11 | | again, like the old-fashioned creation scientists, | |
| 12 | | who dismiss so much of establishment science and-- | |
| 13 | | and make arguments that are unrelated to | |
| 14 | | traditional or--or modern establishment science. | |
| 15 | | It--again, it just seems to me to be quite a | |
| 16 | Q | different kind of--of thing. | |
| 17 | | Let's try to get at this another way, perhaps. Do | |
| 18 | | you understand intelligent-design theory to be a | |
| 19 | A | testable and tested hypothesis? | |
| 20 | | Yes, although the tests certainly would be somewhat | |
| 21 | | different from those employed in methodolo--within | |
| 22 | | a methodological naturalism. They may be | |
| 23 | | statistical tests, like Dembski--Dembski offers, | |
| 24 | | or, you know, the notion of irreducible complexity | |
| | | that Behe uses. I mean, that's certainly--that's-- | |

SHEET 22

| | | | | | | |
|----|-----------------------|---|------|-----------------------|---------------|---|
| | Warren A. Nord, Ph.D. | Direct | -82- | Warren A. Nord, Ph.D. | Direct | -84- |
| 1 | | maybe most of them, also come to their convictions | | 1 | analogy, yes. | |
| 2 | | out of an independent assessment of the evidence. | | 2 | Q | Which connotes that man is created in the image of |
| 3 | | Maybe they're open to design explanations because | | 3 | A | God, does it not? |
| 4 | | of religious convictions that they have, but--but | | 4 | A | Well-- |
| 5 | | that's a different question from whether those | | 5 | | MR. GILLEN: Object to form. |
| 6 | | religious convictions actually drive or shape their | | 6 | A | --no, because, again, I want to distinguish between |
| 7 | | conclusions as scientists. | | 7 | | supernaturalism "A" and supernaturalism "B" simply |
| 8 | Q | Okay. You continue that "whether or not IDT is | | 8 | | because there are some folks in the history of |
| 9 | | good science is in part, at least, a philosophical | | 9 | | thought who are supernaturalists "A," and there are |
| 10 | | question." | | 10 | | some folks who are supernaturalists "B," and--and |
| 11 | A | Yeah. | | 11 | | intelligent design is compatible with either. |
| 12 | Q | And you then state, "Modern science has prided | | 12 | | It doesn't require God understood in |
| 13 | | itself on its openness to new evidence and to the | | 13 | | traditional terms of Judaism, Christianity, and |
| 14 | | potential falsification of its theories." Would | | 14 | | Islam. It could be simply the presence of design |
| 15 | | you agree that modern science, however, is not open | | 15 | | in the universe in ways in which other philosophers |
| 16 | | to different methodologies; it insists on-- | | 16 | | have understood as--as a possibility but that |
| 17 | A | Yes. | | 17 | | doesn't rely on--on the idea of God. So--and |
| 18 | Q | --methodological naturalism? | | 18 | | that's a crucial distinction. I--I don't want to |
| 19 | A | Yes. And that then becomes the kind of | | 19 | | lang--we don't--we don't necessarily have to have |
| 20 | | philosophical question that it's important for | | 20 | | God just because we have design. |
| 21 | | science--scientists themselves and students who | | 21 | Q | I'd like to switch gears and talk about the |
| 22 | | study science to be educated about: Is | | 22 | | educational value-- |
| 23 | | methodological naturalism--should methodological | | 23 | A | I'm happy to switch gears. |
| 24 | | naturalism define modern science? Because if--if | | 24 | Q | --of the Dover Area School District-- |
| | Warren A. Nord, Ph.D. | Direct | -83- | Warren A. Nord, Ph.D. | Direct | -85- |
| 1 | | that question isn't opened up for discussion, | | 1 | A | Okay. |
| 2 | | then--then you get what I call scientific | | 2 | Q | --update of the biology curriculum. The biology |
| 3 | | fundamentalism, whereby students are expected to | | 3 | | curriculum was updated to include a preliminary |
| 4 | | accept methodological naturalism more or less as a | | 4 | | statement as follows, quote: "Students will be |
| 5 | | matter of faith, or, that is to say, of trust in | | 5 | | made aware of gaps, slash, problems in Darwin's |
| 6 | | the scientific establishment, rather than any kind | | 6 | | Theory and of other theories of evolution, |
| 7 | | of reasoned conviction about it. | | 7 | | including, but not limited to, Intelligent Design." |
| 8 | | The only way to--to have a re--a reasoned | | 8 | | What are the--do you have any understanding as to |
| 9 | | position on methodological naturalism is if you | | 9 | | what is meant by the "gaps, slash, problems in |
| 10 | | understand something of the alternatives or the-- | | 10 | | Darwin's Theory"? |
| 11 | | the debate about the adequacy of methodological | | 11 | A | (Examines paperwritings.) I don't know what--since |
| 12 | | natural--methodological naturalism going on in our | | 12 | | I haven't read any literature or talked with any of |
| 13 | | larger intellectual life. | | 13 | | the people--what the authors of that statement |
| 14 | Q | To some extent, intelligent-design theorists | | 14 | | mean. I--I can speculate as to what it might be or |
| 15 | | reference things like Mount Rushmore. | | 15 | | what I would take them to be, the--the |
| 16 | A | Yeah. | | 16 | | gaps/problems. |
| 17 | Q | You're familiar with that-- | | 17 | Q | Would it, in your mind, be a reference to gaps in |
| 18 | A | Yeah. | | 18 | | the fossil record, for example? |
| 19 | Q | --sort of "I know it when I see it"? | | 19 | A | It could be. That's certainly one of the--the |
| 20 | A | Uh-huh (yes). | | 20 | | kinds of gaps that oftentimes are mentioned, |
| 21 | Q | That, of course, presupposes that the intelligence | | 21 | | particularly in--in intelligent-design literature. |
| 22 | | underlying the design is an intelligence much like | | 22 | Q | And could it be also the difficulty that evolution |
| 23 | | human intelligence, doesn't it? | | 23 | | has in explaining the crossover from chemistry to |
| 24 | A | Yeah. Well, I mean, that analogy does, yes. Or by | | 24 | | life? |

| | | | |
|-----------------------|--|------|--|
| SHEET 23 | | | |
| Warren A. Nord, Ph.D. | Direct | -86- | Warren A. Nord, Ph.D. Direct |
| 1 A | That would certainly be one of the possibilities, yes. | 1 Q | The latter? |
| 2 Q | Can you think of any other gaps, slash, problems in Darwin's theory? | 2 A | Right, probably, but--but I don't know. |
| 3 A | Well, I think another big one would be the development of--of sexual reproduction. My understanding is that--this is nothing I'm an expert on, but my understanding is that that does create a large problem, how you get sexual reproduction where only the--half the genes of--of each parent become transmitted to the offspring, that that's not what neo-Darwinism would--would lead one to think should happen. So how do you--how do you get bisexual reproduction? That might be one. I don't--I don't know. | 3 Q | Okay. |
| 4 | | 4 A | I don't know. |
| 5 | | 5 Q | In your view, is intelligent design another theory of evolution? |
| 6 | | 6 | |
| 7 | | 7 | MR. GILLEN: Objection. Form. |
| 8 | | 8 | Speculation. |
| 9 | | 9 A | Well, I mean, I--my impression is that at least some, Behe says most, intelligent-design theorists accept evolution. The question is the mechanism of evolution. I don't know whether that's the case. |
| 10 | | 10 | I--I just don't know whether most intelligent-design theorists accept evolution in--in some form. |
| 11 | | 11 | Well, I don't know. |
| 12 | | 12 | |
| 13 | | 13 | |
| 14 | | 14 | |
| 15 | | 15 | |
| 16 | I mean, certainly, there are particular kinds of cases, the things that Behe talks about, in--in cellular biology and biology. There's--there's the kind of problem that Gould tried to address with punctuated equilibria, the rapid transitions in evolution. I suspect that's probably one. And then the absence of--of fossil--intermediate fossils in those kinds of cases. I suspect those are the kinds of things, but I don't | 16 Q | Okay. So, if the school board had in mind that intelligent design was an alternative theory of evolution to Darwinian theory-- |
| 17 | | 17 | Uh-huh (yes). |
| 18 | | 18 | |
| 19 | | 19 A | --you would say that that's not consistent with your understanding of intelligent design? |
| 20 | | 20 Q | I'm sorry. Say that again? If-- |
| 21 | | 21 A | If the school board-- |
| 22 | | 22 Q | Uh-huh (yes). |
| 23 | | 23 A | |
| 24 | | 24 Q | |
| | | | |
| Warren A. Nord, Ph.D. | Direct | -87- | Warren A. Nord, Ph.D. Direct |
| 1 | know what in particular the authors meant. | 1 Q | --understood that intelligent design was a theory |
| 2 Q | Well, let me just test--see if I understand--strike that. | 2 | of evolution-- |
| 3 | | 3 A | Uh-huh (yes). |
| 4 | I'd like to ask you if you have an understanding as to the structure of this sentence. | 4 Q | --that stood in contrast to Darwinian-- |
| 5 | One way to read it is that students will be made aware of gaps/problems in Darwin's theory and that they will be made aware of gaps/problems in other theories of evolution. | 5 A | Uh-huh (yes). |
| 6 | | 6 Q | --evolution, you would say that is not consistent with your understanding of intelligent design? |
| 7 | | 7 A | I guess what I want to say is that intelligent |
| 8 | | 8 Q | design is certainly compatible with evolution, or |
| 9 | | 9 A | many--many intelligent-design theorists, my |
| 10 A | Yes. | 10 Q | impression is, accept evolution but reject natural |
| 11 Q | Do you read it that way? | 11 A | selection as the--as able to explain evolution. |
| 12 | MR. GILLEN: Objection. Form. | 12 Q | But--but I just--I don't know what that sentence |
| 13 | Speculation. | 13 A | means. |
| 14 A | (Examines paperwritings.) I'm puzzled as to that sentence, too. I--that seems to be--do you want to a suggest another reading to it? | 14 Q | And isn't it also true that many intelligent-design |
| 15 | | 15 A | theorists don't accept that some aspects of |
| 16 | | 16 Q | biological life-- |
| 17 Q | Another reading might be "Students will be made aware of gaps/problems in Darwin's theory, and they"-- | 17 A | Uh-huh (yes). |
| 18 | | 18 Q | --could not be the product of evolution? |
| 19 | | 19 A | I mean, certainly, there are some who believe |
| 20 A | And then made aware of other theories. | 20 Q | that-- |
| 21 Q | --"and then they will also be made aware of other theories of evolution, including intelligent design." | 21 A | Behe, for example, doesn't use-- |
| 22 | | 22 Q | Yeah. That's right. Not the product of |
| 23 | | 23 A | neo-Darwinian evolution. |
| 24 A | Well, I suspect that's what it means because-- | 24 | |

| SHEET 25 | | |
|----------|---|-------------|
| 1 | Warren A. Nord, Ph.D. | Direct -94- |
| 2 | can--I could--that's not the only possibility. The other possibility would be that--another | |
| 3 | possibility would be that they mean "We simply don't raise religious or philosophical questions about where life came from. We stick to science." | |
| 4 | I mean, it could mean that. That might be a somewhat naive view, but it--it could mean that, | |
| 5 | too. | |
| 6 | | |
| 7 | Q Okay. The statement continues, quote, "Intelligent | |
| 8 | Design is an explanation of the origin of life"-- | |
| 9 | Uh-huh (yes). | |
| 10 | | |
| 11 | Q ---"that differs from Darwin's view." What was | |
| 12 | Darwin's view on the origin of life? | |
| 13 | | |
| 14 | A I wouldn't--I wouldn't--I wouldn't write the sentence that way, either. The point is--all | |
| 15 | right. If--if "the origin life" does mean how do you get from nonliving matter to--to life, then | |
| 16 | there's no Darwinian explanation. And in fact, as | |
| 17 | I understand it, that is a huge scientific mystery still. We--we just don't know how--how that | |
| 18 | happened either on grounds of methodological naturalism or maybe any other, other than religious | |
| 19 | or philosophical, I suppose. There are | |
| 20 | possibilities there. | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 1 | Warren A. Nord, Ph.D. | Direct -95- |
| 2 | So--so, yes, if--if the reference is to | |
| 3 | the transition from--from nonliving matter to | |
| 4 | living matter, then there wasn't a Darwinian theory | |
| 5 | about that. Darwinism only kicks in once you've got reproduction. | |
| 6 | Q So, if instead we read this as referring not to | |
| 7 | "origin of life" but to "origin of species"-- | |
| 8 | A Origin of species and--and how did human beings | |
| 9 | come to be out of prehominids or--or whatever, then | |
| 10 | it's true that intelligent design might well have-- | |
| 11 | or--or would have a different account of how that | |
| 12 | story goes because of its willingness to use design | |
| 13 | explanations. | |
| 14 | Q If intelligent-design theorists are primarily | |
| 15 | evolutionists, it's not really a different | |
| 16 | explanation for the origin of life, is it? | |
| 17 | MR. GILLEN: Objection to-- | |
| 18 | A Oh, sure it is. Sure it is. | |
| 19 | Q It's only a difference from neo-Darwinism-- | |
| 20 | A Yes. | |
| 21 | Q --not from Darwin's view, correct? | |
| 22 | A No. | |
| 23 | MR. GILLEN: Objection. | |
| 24 | A It would also be from Darwin's view. And what | |
| 1 | Warren A. Nord, Ph.D. | Direct -96- |
| 2 | Darwin didn't have was modern genetics. But Darwin | |
| 3 | still had natural selection, and that was the | |
| 4 | mechanism that he thought worked on chance | |
| 5 | variations. But he couldn't explain the chance | |
| 6 | variations, and--and biologists couldn't till we | |
| 7 | get modern genetics. | |
| 8 | But, still, for Darwin--Darwin says in | |
| 9 | his autobiography there's no more direction in | |
| 10 | evolution than in the way the wind is blowing--how | |
| 11 | does he put it?--there's no more design in--in | |
| 12 | evolution than in the way the wind blows. And | |
| 13 | Darwin was clear it was an unguided, purposeless | |
| 14 | process. | |
| 15 | So, if you--if you introduce design, if | |
| 16 | you allow design explanations, you've at least got | |
| 17 | the possibility for a--a quite different account of | |
| 18 | how human beings come to be. Now, you-- | |
| 19 | Now, let me interrupt-- | |
| 20 | Q Okay. All right. | |
| 21 | A --if I may, because I would ask you to point me to | |
| 22 | the writings of any intelligent-design theorist | |
| 23 | that claims there is a purpose in evolution and | |
| 24 | explains what that purpose is. | |
| 1 | MR. GILLEN: Objection to the form. | |
| 1 | Warren A. Nord, Ph.D. | Direct -97- |
| 2 | I--I think that neo-design--pretty soon, we'll have | |
| 3 | neo-design theory. | |
| 4 | Q We already do. | |
| 5 | A Intelligent-design theory is in its infancy, and-- | |
| 6 | and, you know, maybe--you know, it may be it won't | |
| 7 | be long-lived. I--I don't know. But I don't think | |
| 8 | there's anything like a full-fledged, at this | |
| 9 | point, intelligent-design theory that--what, I | |
| 10 | mean, Behe does is show that at the cellular level | |
| 11 | there are various kinds of--of problems. | |
| 12 | There are others--there are other gaps in | |
| 13 | the evolutionary account that we talked about | |
| 14 | earlier for which design explanations--for--for | |
| 15 | which we might find or appeal to design | |
| 16 | explanations, but--but I don't think there's | |
| 17 | anything like a full-fledged intelligent-design | |
| 18 | theory yet. | |
| 19 | But still, what intelligent-design | |
| 20 | theorists have come up with is very suggestive | |
| 21 | and--and, I think, significant, in part because of | |
| 22 | its implications, and particularly for its--the | |
| 23 | questions it raises about the nature of science and | |
| 24 | whether science needs to be defined more broadly. | |
| 1 | Q Can we agree that, as you understand it, | |

SHEET 26

| | | | | | | |
|----|-----------------------|---|------|-----------------------|---|-------|
| | Warren A. Nord, Ph.D. | Direct | -98- | Warren A. Nord, Ph.D. | Direct | -100- |
| 1 | | intelligent design is not an explanation of the | | 1 | is inadequate to explain the mind, that you need-- | |
| 2 | | origin of life in the sense of life going from | | 2 | that--that mind is something that requires a quite | |
| 3 | | innate chemistry to living matter? | D | 3 | different kind of explanation than modern science | |
| 4 | A | I don't think that there's a complete theory there. | | 4 | and naturalism can--can provide. | |
| 5 | | There's--that's my impression. Again, I mean, | | 5 | So that at both ends of our thirteen- | |
| 6 | | I'm--I'm a philosopher looking at this literature | | 6 | billion-year history, you've got design that--that | |
| 7 | | from some distance, but my impression is that | | 7 | oftentimes is--is argued for on secular grounds | |
| 8 | | there's not a complete theory of how design figures | | 8 | rather than religious grounds. So that the | |
| 9 | | in at all stages of evolution, that there are some | | 9 | intervening stages of how life came to be and--and | |
| 10 | | gaps, some problems for Darwinists, and there are | | 10 | biological evolution--that--that there are design | |
| 11 | | some particular places where design looks like a | | 11 | explanations which are now being made available | |
| 12 | | pretty obvious explanation where there are no | | 12 | seems to fit a larger pattern than--so, in part-- | |
| 13 | | competing Darwinian explanations. So that there's | | 13 | that's one of the reasons that I take it seriously, | |
| 14 | | kind of the sketch of a--of an alternative theory | | 14 | is that it--it fits that larger pattern, and you | |
| 15 | | that's--that's available. But--but, obviously, a | | 15 | don't just look at the--you don't have to just look | |
| 16 | | lot of work still needs to be done to fill in that | | 16 | at the kinds of arguments that Behe makes about | |
| 17 | | sketch. | | 17 | cells. That's an important piece of the puzzle, | |
| 18 | | One other thing that I'd say here, too, | | 18 | but--but the puzzle's a big puzzle. | |
| 19 | | that seems to me to be important, and--and that is | | 19 | Spanning thirteen billion years? | |
| 20 | | that, I mean, one of the reasons that I take design | | 20 | Spanning thirteen billion years, yeah, that's | |
| 21 | | theory seriously as a possible explanation, | | 21 | right. | |
| 22 | | competing explanation, is that it seems to me that | | 22 | MR. GILLEN: Let the record reflect it is | |
| 23 | | you can make a fairly strong case for design in | | 23 | not a young earth. | |
| 24 | | cosmological evolution, the kind of anthropic | | 24 | THE WITNESS: Yeah. | |
| | Warren A. Nord, Ph.D. | Direct | -99- | Warren A. Nord, Ph.D. | Direct | -101- |
| 1 | | fine-tuning arguments that have received a lot of | | 1 | The statement goes on to say, quote, "The school | |
| 2 | | discussion among cosmologists and philosophers. | | 2 | leaves the discussion of the Origins of Life to | |
| 3 | Q | Just-- | | 3 | individual students and their families." In your | |
| 4 | A | At one end-- | | 4 | view, that is not a good thing, is it? | |
| 5 | Q | Just so we are--are communicating, "cosmology" | | 5 | MR. GILLEN: Objection to form. | |
| 6 | | meaning how the universe got to-- | | 6 | Shouldn't a liberal education address discussion of | |
| 7 | A | Yes. | | 7 | origins of life? | |
| 8 | Q | --be the way it is? | | 8 | Yes. But--but again, I don't know exactly what the | |
| 9 | A | Yeah. In the--in the wake of the Big Bang, the | | 9 | authors meant by-- | |
| 10 | | very extraordinary set of coincidences that | | 10 | Whichever they mean-- | |
| 11 | | allowed--that made this universe a universe that in | | 11 | --teaching the origins of life. | |
| 12 | | the end produces life. The--the extent to which | | 12 | --whether they mean converting from innate | |
| 13 | | cosmologists and defenders of the naturalistic | | 13 | chemistry to living matter-- | |
| 14 | | worldview have to go to to discredit that | | 14 | Yeah. | |
| 15 | | idea usually requires the appeal to an infinite | | 15 | --or whether they mean how speciation occurred-- | |
| 16 | | number of universes, which is an extraordinary move | | 16 | Yeah. | |
| 17 | | to make. | | 17 | --whichever they meant, you would think schools-- | |
| 18 | | So--so, you--you get a kind of plausible | | 18 | Well-- | |
| 19 | | design argument out of fine--cosmological | | 19 | --a liberal education should address it? | |
| 20 | | fine-tuning. And on this end, thirteen billion | | 20 | A liberal education should, and invariably does. | |
| 21 | | years later, there's--there's a fair amount of-- | | 21 | It's just a question of whether it's implicit or | |
| 22 | | secular philosophers oftentimes reject naturalistic | | 22 | explicit. | |
| 23 | | explanations of the mind. One doesn't have to be | | 23 | Then this--there's an explanation, which reads, | |
| 24 | | religious, by any means, to believe that naturalism | | 24 | quote, "The foregoing statements were developed to | |

SHEET 33

| | | | | | | | |
|----|-----------------------|---|-------|----|-----------------------|---|-------|
| | Warren A. Nord, Ph.D. | Direct | -126- | | Warren A. Nord, Ph.D. | Direct | -128- |
| 1 | | about it. So a liberal education requires that-- | | 1 | Q | I had the sense of your earlier answer that perhaps | |
| 2 | | that schools provide students some kind of an | | 2 | | it would be better if students were a little older | |
| 3 | | understanding of these larger philosophical, | | 3 | | and more sophisticated when they were introduced to | |
| 4 | | sometimes religious, questions. Otherwise, we | | 4 | | these concepts. But I heard you to be saying since | |
| 5 | | leave them unable to think critically about the | | 5 | | that's where schools teach biology-- | |
| 6 | | conclusions that we present to them. | | 6 | A | Yeah. | |
| 7 | Q | And I take it, in your view, the ninth grade is | | 7 | Q | --that's where they have to address this. And that | |
| 8 | | certainly none too early to start? | | 8 | | lead me--led me to my alternative suggestion: | |
| 9 | A | I--no. I--I think there's a real question about | | 9 | | Would it be better, in your view, for high schools | |
| 10 | | when students became--become mature enough to deal | | 10 | | to defer teaching biology--and along with it, | |
| 11 | | with controversial kinds of issues and able to | | 11 | | teaching-- | |
| 12 | | understand the alternatives. So that I would say | | 12 | A | Yeah. | |
| 13 | | there's a real difference between elementary and | | 13 | Q | --additional explanations as to the significance, | |
| 14 | | secondary schools in when we start introducing them | | 14 | | meaning, purpose of life--when students were a | |
| 15 | | to--to deeply controversial points of view and | | 15 | | little older and better able to grasp-- | |
| 16 | | arguments and discussions. | | 16 | A | Well, if students took biology when they were | |
| 17 | | But ninth grade is when many students | | 17 | | seniors instead of freshman, they would probably be | |
| 18 | | study biology, and it may be the only time that | | 18 | | in a better position to understand some of the | |
| 19 | | many students study biology. So that it's | | 19 | | controversies. They would be more--they could be | |
| 20 | | essential that they get some introduction to the | | 20 | | more intellectually sophisticated and--and make | |
| 21 | | fact that there are contending ways of | | 21 | | sense of it better. That's true. But--but | |
| 22 | | understanding nature at that time. | | 22 | | you're--you--you can't teach everything when | |
| 23 | Q | Would it be better, in your view, for high schools | | 23 | | students are seniors. I mean, you've got to teach | |
| 24 | | to teach biology in the twelfth grade instead of | | 24 | | them some things when they're in ninth grade, some | |
| | Warren A. Nord, Ph.D. | Direct | -127- | | Warren A. Nord, Ph.D. | Direct | -129- |
| 1 | | the ninth grade? | | 1 | | things when they're in tenth, and so on. And--and | |
| 2 | | MR. GILLEN: Objection. Speculation. | | 2 | | you have--you have to balance that with arguments | |
| 3 | | MR. WILCOX: As to what his own view is? | | 3 | | that science educators would make about what the | |
| 4 | | MR. GILLEN: Well, yeah. What did you | | 4 | | proper sequence should be in teaching students the | |
| 5 | | ask him? I'm sorry, Chub. I thought you said-- | | 5 | | sciences. And ninth grade isn't too early to give | |
| 6 | | should they do it? | | 6 | | them some sense of what's at issue. So, you know, | |
| 7 | | THE WITNESS: I'm--I only speculate about | | 7 | | there are a lot of variables that you weigh when | |
| 8 | | my own views. | | 8 | | you decide what--what to teach them when. | |
| 9 | | MR. GILLEN: Okay. Good. | | 9 | | But, yes, in principle, it would be nice | |
| 10 | Q | (By Mr. Wilcox) No, I detected in your last answer | | 10 | | if students were a little older and more mature and | |
| 11 | | the notion that because that's where high schools | | 11 | | better able to understand some of the issues than | |
| 12 | | teach biology that's where it has to be addressed. | | 12 | | they are in--in ninth grade. But then you might | |
| 13 | | But I'm saying-- | | 13 | | have to teach physics in ninth grade, and then you | |
| 14 | A | It's not the only place where it has to be | | 14 | | couldn't make the--they wouldn't understand some of | |
| 15 | | addressed. I mean, I think physics courses should | | 15 | | the alternatives there. So, you know, I don't know | |
| 16 | | deal with the question of cosmological fine-tuning | | 16 | | how you sort that out. | |
| 17 | | and-- | | 17 | Q | If you would, turn to the top of Page 8 of your | P |
| 18 | Q | But I'm sticking with biology for a minute and-- | | 18 | | report. The--you make some statements here that I | P |
| 19 | A | Yeah. | | 19 | | just need to have your help understanding. | P |
| 20 | Q | --and the meaning of life-- | | 20 | A | (Examines paperwritings.) Uh-huh (yes). Okay. | P |
| 21 | A | Yeah. | | 21 | Q | You say, quote, "Because scientific theories can be | P |
| 22 | Q | --what--what--the question whether there is meaning | | 22 | | confirmed they aren't mere speculation." I'm not | P |
| 23 | | or purpose in biological life. | | 23 | | quite sure what you mean by that. Do you-- | P |
| 24 | A | Right. | | 24 | A | Well, I think some people who talk about evolution | P |

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1 being--or, you know, Darwinism being a theory
 2 mean--mean to discredit it by saying it's mere
 3 speculation. So the scientific establishment has
 4 responded in turn that a theory isn't mere
 5 speculation and hypothesis, that the theories can
 6 be confirmed.

7 And I think that's a--that's a valid
 8 viewpoint. Theories can be confirmed. They can be
 9 confirmed more or less. And, so, oftentimes,
 10 neo-Darwinism--or evolution, the idea--the theory
 11 of evolution is contrasted with heliocentric theory
 12 or the theory of gravity, which have so much
 13 confirmation that--that it's wildly misleading to
 14 suggest they're mere speculation. And I--and I
 15 agree with that.

16 So the--the effort on the part of--of
 17 some opponents of evolution to say that it's a--
 18 it's a--it's a mere theory, I think, missed the
 19 legitimate scientific point that theories can be
 20 confirmed.

21 Q Okay. And then you say, "I believe it is
 22 appropriate for science texts"--and, I assume,
 23 science teachers--

24 A Uh-huh (yes).

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1 out of electrons and protons and neutrons and
 2 photons and, you know, all of those things--that's
 3 a theory. That's--that has to do with atomic
 4 theory. And--and I can't observe any of that stuff
 5 directly. That's a--that hinges on all kinds of
 6 scientific laws and--and complicated theories,
 7 which have implications for our observations but--
 8 but go way beyond our observations.

9 So that the theor--neo--neo-Darwinism as
 10 a theory rests on a whole set of complex
 11 considerations and complex kinds of arguments and--
 12 and evidence. We can't observe evolution. And--
 13 and that's important, because factual judgments can
 14 be confirmed directly by virtue of our
 15 observations; theories can be more or less
 16 confirmed, but they go way beyond our immediate
 17 observations.

18 So, most scientists, I think, believe
 19 that neo-Darwinism is a confirmed theory. Now, I
 20 would say probably--and I perhaps should have said
 21 that--that its confirmation has a high degree of
 22 probability for most scientists. Most scientists
 23 accept it as a confirmed theory.

24 But because--but there's still a point to

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1 Q --"to teach students that most scientists believe
 2 that neo-Darwinism is a confirmed theory."
 3 A Yes.
 4 Q And then you continue by saying, "Still"--which I
 5 interpret as kind of a "however"--"the
 6 distinction"--
 7 A (Examines paperwritings.) Yes, you're right.
 8 That's a still--that's a "however" "still."
 9 Q --"the distinction rightly suggests that because
 10 neo-Darwinism is a theory, its confirmation rests
 11 not simply on observation"--
 12 A As do facts.
 13 Q --"but on a wide range of complex considerations
 14 which are potentially open for reinterpretation."
 15 A Yes.
 16 Q Now, you lost me there, because I thought
 17 confirma--theories are confirmed by observation and
 18 not by a wide range of complex considerations.
 19 A Oh. Facts--facts are things that we observe
 20 directly. Theories hinge on all kinds of things we
 21 can't observe directly.
 22 So that--I mean, it's a fact that the cup
 23 is right here. (Indicating.) I can observe it
 24 directly. But that--the fact that the cup is made

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1 the kind of objection that some people make to--to
 2 evolution, because its confirmation rests on a
 3 whole set of complicated considerations that are
 4 perhaps open to alternative interpretation, namely
 5 design interpretations.
 6 Q Okay.
 7 A But--but I think that students should be taught--
 8 you know, I'm not in favor of--of balanced
 9 treatment in the sense of giving equal time to
 10 alternative theories. And in my ideal biology
 11 textbook, you know, you don't give equal time to
 12 Biblical creationism, or--or just limiting us to
 13 scientific views, to design theory and to
 14 establishment science, but, of course,
 15 establishment science has got to receive most of
 16 the--the time and--and--pages in the textbook and
 17 hours in the--in the class. But you can't exclude
 18 legitimate alternatives.

19 And so design theory has to be taken at
 20 least seriously enough so students are made aware
 21 of it and given, ideally, some sense of what it is.
 22 Short of that, the kind of disclaimer that Dover
 23 wants to have seems to me to be a very, very modest
 24 step in the right direction.

SHEET 35

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1 Q Under the heading "The Present Case"--
 2 A (Examines paperwritings.) Yes.
 3 Q --you say, "By making students aware of the
 4 controversy surrounding Darwin's theory of
 5 evolution, including IDT, the Dover School District
 6 is promoting legitimate, secular, pedagogical goals
 7 and enhancing their science education and student
 8 learning." Given some of the ambiguities,
 9 inconsistencies, problems, and gaps that we've
 10 noticed in the--
 11 A Yeah.
 12 Q --board's statement, and the fact that it is just
 13 read and then abandoned for the rest of the--
 14 A Yes.
 15 Q --semester, do you think this might be an
 16 overstatement here? D
 17 A (Examines paperwritings.) It is promoting a
 18 legitimate, secular, pedalogic--pedagogical goal,
 19 and it is minimally enhancing their science
 20 education and student learning.
 21 I mean, you're right. It's--it's--you
 22 know, I--I think Judge Cooper's decision was
 23 ludicrous because he thought that that little
 24 disclaimer that they pasted in the Georgia

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1 Q this statement--
 2 A Uh-huh (yes).
 3 Q --that we just quoted is as to whether there is or
 4 is not purpose underlying life?
 5 A It's--it's the--it's to make them aware of the
 6 controversy regarding design explanations in
 7 biology, yes, that--that there is an alternative
 8 theory for understanding nature that--that involves
 9 design explanations, yes, and so is--you know, I
 10 want it to be much more substantial than it is
 11 to--to really serve the purposes of liberal
 12 education. But it--but it--it serves the minimal
 13 purpose of alerting them to a controversy that's--
 14 that's real and that's important.
 15 Q And that's the contro--the controversy is--
 16 A Is--is over whether design explanations have a role
 17 in biology.
 18 Q And by "design explanations" here--
 19 A Uh-huh (yes).
 20 Q --we're using it not in the sense of design of a
 21 particular bacterial flagellum but rather in the
 22 broader sense of "Is there purpose to life?" Is
 23 that--
 24 MR. GILLEN: Objection to form.

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1 textbooks somehow or another conveyed the idea that
 2 the--that the school board was on the side of--or
 3 was--was opposed to--to teaching--teaching
 4 evolution, in spite of the fact that the school
 5 board chose the textbooks, which, as he
 6 acknowledged, had hundreds of pages on evolution.
 7 So, I mean, it's ludicrous to attach that
 8 much importance to the sticker--which also, of
 9 course, means, you know, why are you-all so upset
 10 about it?--because it--it doesn't have that kind of
 11 cosmological import.
 12 But--but it serves the--the goal in a--in
 13 a kind of mini--minimal but important way of--of
 14 making students aware of the fact that there are
 15 alternatives. And that in itself is worthwhile
 16 even if it isn't nearly as--as--have the kind of
 17 substantial implications that it--that it should.
 18 I mean, as I said, I would have students
 19 learn something much more about the philosophical
 20 and historical issues relating to design and--and
 21 methodological naturalism and neo-Darwinism than
 22 is--than is usually done, but at least make them
 23 aware of the fact that there's a controversy.
 24 Q Okay. The controversy that you're referring to in

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1 Q Isn't that what you mean?
 2 A The--the two are related, but, I mean, intelligent-
 3 design theory, insofar as it holds that there are
 4 design explanations that are--are plausible, that
 5 are reasonable explanations, is compatible with and
 6 open to the possibility, then, that there is some
 7 kind of larger design in nature. It's also open to
 8 the possibility that there's a supernatural
 9 explanation, but it doesn't require any of those
 10 things.
 11 But--but, yeah, I mean, I think that--
 12 that the--that the controversy is over whether or
 13 not--that--the--the underlying principle is that
 14 when there's a controversy, students should be made
 15 aware of different points of view.
 16 Now, there's a controversy over
 17 evolution. Some of the points of view are
 18 religious. And I think they should be included
 19 at--at some point in the--in the curriculum.
 20 Where, is an important question, obviously.
 21 But there are also--there is also a--a
 22 scientific controversy, at least if we are willing
 23 to have a somewhat broader definition of science
 24 than establishment science holds. There's a

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1 controversy about that, what it means to be
 2 scientific. And students should inform--be
 3 informed about that.

4 And--and then the controversy is, do
 5 design ex--are design explanations legitimate? I--
 6 I think, since there is a respectable case that can
 7 be made for that, that students need to be made
 8 aware of it. "Respectable" meaning, as we talked
 9 before, in terms of arguments and evidence cited by
 10 people who have credentials in science and who use
 11 other aspects of science as--as--in the process of
 12 being scientists, who--who don't flatly reject
 13 everything that science has to say, and that aren't
 14 incompetent and un--uneducated in establishment
 15 science.

16 Q Let me see if you can agree with this--
 17 A Okay.
 18 Q --statement: Throughout your opinion, you have
 19 referred to significant disagreement and important
 20 controversies. Isn't it true that what makes the
 21 controversy important is the implications as to
 22 whether there is a meaning to life-- D
 23 A Uh-huh (yes).
 24 Q --other than sheer random, unguided, purposeless

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1 important. And--and the warrant of references to
 2 intelligent design, and ideally some discussion of
 3 it, stem from the fact that there is--there is a
 4 serious intellectual controversy among scholars,
 5 credible scientists, and philosophers who--some of
 6 whom are secular, not--not religious, about the
 7 nature of design in--the nature of design in
 8 nature, the--whether--whether there's design in
 9 nature. And, as I said, not just in biology but
 10 also in cosmology, and also in how we understand
 11 the brain and the mind, and in other areas of
 12 science.

13 So it's not just this case, even though
 14 that's the one people pick up on 'cause that's--
 15 that's the one that is personally--it's a part of
 16 our culture wars.

17 Q Do you believe ninth-grade biology students should
 18 be taught that man and the species as we know them
 19 today did not gradually evolve from other life
 20 forms but appeared suddenly in the historical
 21 record?

22 A If you mean should they be taught that that is
 23 true, the answer is no. That--that would be, in
 24 fact, an endorsement of a religious worldview, and

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1 actions of atoms?

2 A Yeah. I mean, that's what--that's what makes the
 3 controversy important to most people. And--and I
 4 can't--I don't know what--I've not talked with and
 5 I've not read what the school board said about it,
 6 so I--you know, I can't speak to--to that.

7 But, for most people, undoubtedly, that's
 8 why it's important. That's not the only reason or
 9 maybe even--I mean, that's one--one reason why
 10 students should be educated about the controversy.

11 But the other reason is because there is
 12 a debate, a controversy, among scientists about
 13 what counts as a good and an adequate scientific
 14 explanation. And that controversy in and of itself
 15 is important enough to warrant refu--reference to
 16 intelligent design, I think, in--in the curriculum.

17 Now--now, many people, no doubt, would--
 18 would say, "I could care less about this--this
 19 debate among scientists and--and who gets to count
 20 as scientists and who doesn't. I believe what
 21 Genesis tells me." I--I mean, of course. And
 22 that's why this debate is so important to many
 23 people.

24 But that's not the only reason it's

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1 it would be unconstitutional and would also be--I
 2 mean, it's a deeply controversial position held by
 3 a minority of scholars.

4 So, no, they shouldn't be taught that
 5 that's true. But as I said earlier, it seems to me
 6 that an introductory biology text, whether in
 7 undergraduate school or in high school, should
 8 locate biology within historical and philosophical
 9 controversies, so that if students are to be
 10 liberally educated, they appreciate the tensions,
 11 the conflicts, the overlaps between various ways of
 12 making sense of nature.

13 So, yes, I think a Biblical text--I
 14 mean--Biblical--a biological text--which is a
 15 Biblical text to some people--a biological text
 16 might well say something about creationism and
 17 Genesis--not much, but a little--talk about the
 18 differences between that and intelligent-design
 19 theory, talk about other ways, maybe Lamarckian
 20 evolution--

21 Q Would it be okay--
 22 A --so--
 23 Q --for a text, and teachers teaching in accordance
 24 with the text, to explain to students that, you

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 1 know, for a long time, Western man thought that God
 2 created the earth and everything in it just the way
 3 the Bible said--
 4 A Sure.
 5 Q --and that notion has now been scientifically
 6 discredited by everything we've come to understand
 7 through study of the fossil record and the nature
 8 of life processes?
 9 A No. I--I think probably it would be const--legally
 10 wise to--to qualify that last judgment and say that
 11 most--many scientists--most scientists--
 12 Q Ninety-nine-point-four--
 13 A --believe something--believe something otherwise--
 14 Q Ninety-nine and forty-four--
 15 A --right--than simply say--
 16 Q --one-hundredths percent?
 17 A --than simply say the Bible is wrong.
 18 Q But it--it would be okay, in your view, to teach
 19 that ninety-nine and forty-four one-hundredths
 20 percent, or whatever the number is--
 21 A Yeah.
 22 Q --think that that's--
 23 A I argue, in--in that book and elsewhere, for what I
 24 call the principle of cultural location and weight.

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 1 has to be mentioned. It has to be acknowledged.
 2 MR. WILCOX: Thank you very much.
 3 MR. GILLEN: Thank you, Chub. Thanks,
 4 Warren.
 5 (WITNESS EXCUSED)

7 (WHEREUPON, THE DEPOSITION WAS CONCLUDED AT 12:38 P.M.)
 8 -----

D
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 1 That is to say that when we locate students in
 2 con--in--when we locate contemporary science or
 3 contemporary economics or whatever in the larger
 4 cultural conversation, students shouldn't just be
 5 presented with alternatives like our cafeteria
 6 line, again. They should be given some sense of
 7 what the--what the majority positions are, what the
 8 minority positions are, and for whom.
 9 So, yes, I think sci--I think students
 10 should be taught in biology classes that the
 11 majority--the vast majority of scientists hold to a
 12 neo-Darwinian view, but that not all of them do.
 13 And I would, you know, want to convey the
 14 idea that--that, of course, many scientists don't
 15 deal with biology and neo-Darwinism, but of those
 16 who do, the vast majority hold to neo-Darwinism;
 17 but it isn't the only view, and--and there are
 18 people who raise questions about it who have
 19 credentials as--as scientists, and so you need to
 20 learn something about it.
 21 You don't give equal time to the two
 22 points of view. Of course, the dominant
 23 establishment view gets the most time and the most
 24 pages in the textbook. But the other point of view

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 INSTRUCTIONS TO WITNESS:
 Please read carefully the following Witness Certificates
 and then sign and date the appropriate certificate.
 Do NOT sign both of them!

 IF YOU MADE CORRECTIONS, SIGN CERTIFICATE (A):
 CERTIFICATE OF WITNESS (A)
 I, _____, a witness
 in the above-entitled action, do hereby certify that I have
 reviewed the transcript of my deposition and have attached
 corrections to the same, along with the reason for each
 correction.
 Signed this _____ day of _____, 2005.
 _____ (WARREN A. NORD, PH.D.)

 IF YOU DID NOT MAKE CORRECTIONS, SIGN CERTIFICATE (B):
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 I, _____, a witness
 in the above-entitled action, do hereby certify that I have
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 corrections to the transcription.
 Signed this _____ day of _____, 2005.
 _____ (WARREN A. NORD, PH.D.)

 xrl: (6-7-2005)